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REMARKS/ARGUMENTS

Claims 1-10 are in the application as filed.

Claims 1-10 stand rejected. Claims 1 and 3-10 have been amended in this paper for formatting purposes and to correct grammatical and typographic errors. New claims 11-14 have been added.

No new matter has been added by the foregoing amendments, full support therefor being shown in the drawings and specification as filed. All claims in the application are believed to be in condition for allowance.

Reconsideration and reexamination of the application is respectfully requested in view of the referenced amendments and the following remarks.

Objection to the Claims

Claim 9 stands objected to as allegedly containing a grammatical error. The objection is traversed.

Claim 9 has been amended to change the phrase "on of appliances " to "on one of the appliances," thereby removing the grounds for the objection. A similar correction has been made to claim 4.

Applicants request the withdrawal of the objection.

Rejection Under 35 U.S.C. §102(b)

Claims 1, 2, 4, 6, 7, and 9 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,572,428 to Ehlers et al. The rejection is traversed.

Ehlers '428 discloses a home-based local area network comprising a plurality of power-using devices, or "loads," each of which is connected into the network by a control module. The

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control module contains a relay or switch, i.e. a circuit breaker, to disconnect the load from the power mains upon command or upon occurrence of a power outage, a current monitor for determining whether a connected load is drawing current, or a power monitor for monitoring the power consumed by the load. The network also includes a pair of microcomputers, one of which is placed externally to the customer premises, associated with the electric utility power meter, the other of which is placed inside the customer premises. The two microcomputers communicate with each other and with the various load control modules, and the external microcomputer communicates with the utility company. The internal microcomputer enables the customer to set load operational parameters and query the system as to power usage information. Management of the loads comprises turning the loads on or off according to a user-provided timing schedule or price-driven customer-set conditions, with the power utility initiating a "load-shedding" turn on or turn off command.

The claimed invention is not anticipated under §102 unless each and every element of the claimed invention is found in the prior art. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986). To anticipate, a single reference must teach each and every limitation of the claimed invention. *Eolas Technologies Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1335; 73 U.S.P.Q.2D (BNA) 1782 (Fed. Cir. 2005). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The rejection fails to satisfy these standards.

Claim 1 is patentable over Ehlers '428 because each and every element of claim 1 is not found in Ehlers '428. Claim 1 calls for a process for managing the power demand of one or more appliances. The process comprises, in pertinent part, assessing for each appliance an energy consumption profile, summing the energy consumption profiles of the appliances to determine if their sum leads to one or more peaks in power demand, and providing new energy consumption profiles to the appliances for leveling the total power absorbed by the appliances. This methodology is not disclosed in Ehlers '428.

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Ehlers '428 discloses a multiple computer-based communication network for determining and initiating the on and off states of power consuming devices. Nothing in Ehlers '428 even suggests the establishment of power consumption profiles for the power consuming devices, the summing of such profiles, or the generation of new energy consumption profiles for leveling the total power consumed by the power consuming devices. The Examiner's assertions that cited figures and portions of the specification disclose the elements of claim 1 are, respectfully, in error and mischaracterize the teaching of Ehlers '428. The cited material is addressed to completely unrelated matters, and is simply irrelevant to the claimed invention.

For example, the Examiner cites Figures 26A and 26B, column 22, lines 22-26, and column 23, lines 32-34 as disclosing the claim 1 element "summing the energy consumption profiles to determine if their sum leads to one or more peaks in power demand." However, Figures 26A and B illustrate a schematic circuit diagram for a load control module for monitoring power consumed in a multiplicity of branch circuits. Figures 26A and B have nothing to do with summing energy consumption profiles to determine if their sum leads to one or more peaks in power demand. Column 22, lines 22-26 state "In the embodiment of FIG. 26, in which one module is used to monitor multiple branch circuits (it being assumed there is only one appliance per monitored branch), an assumption is made that all branches receive the same voltage." Column 22, lines 22-26 likewise has nothing to do with summing energy consumption profiles to determine if their sum leads to one or more peaks in power demand. Column 23, lines 32-34 state "The power levels in each of the branches are accumulated by the microcontroller to determine the energy consumed in each branch circuit (appliance)." Ehlers '428 thus maintains a running total of the instantaneous energy consumed. These running totals are maintained on a branch-by-branch basis or what would be an appliance-by-appliance basis when there is a single appliance on each branch. That is, Ehlers '428 maintains a cumulative or running total of the instantaneous power consumption for each appliance. As such, Ehlers is incapable of teaching or suggesting the summing of energy consumption profiles, which are instantaneous energy consumptions at discrete times, because the Ehlers '428 running total is completely different than

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an energy consumption profile. Ehlers '428 does not in any way use energy consumption profiles as required by claim 1. Nowhere does Ehlers '428 assess an energy consumption profile or sum the energy consumption profiles, let alone sum the profiles of one or more appliances to find one or more peaks, as called for by claim 1.

Energy consumption profiles are "accumulated," not "summed." Additionally, power levels in individual branches are retrieved to determine the energy consumed in each branch. They are not summed to determine whether their sum leads to one or more peaks in power demand. Finally, the purpose of this accumulation of data undercuts the Examiner's assertion. The accumulation of data is for reporting purposes: "Both the power and energy are retained for reporting to inquiring devices..." *Col. 23, ln. 34-35*. Column 23, lines 32-34 has nothing to do with summing energy consumption profiles to determine if their sum leads to one or more peaks in power demand. Because each and every element of claim 1 is not found in Ehlers '428, claim 1 is patentable over Ehlers '428.

Claims 2 and 4 depend, directly or indirectly, from claim 1, and are patentable over Ehlers '428 for the same reasons. Applicants request withdrawal of the rejection and the allowance of claims 1, 2, and 4.

Claim 6 is similar to claim 1 and, in pertinent part, calls for a system for managing and curtailing the power demand of one or more appliances. Each appliance has a user interface connected to a control unit, which is adapted to assess an energy consumption profile for each appliance. The control unit is adapted to sum the energy consumption profiles in order to check if their sum leads to one or more peaks in the power demand, and to provide one or more new energy consumption profiles in order to level or reduce the total power absorbed by the appliances. For the same reasons discussed above, 6 is patentable over Ehlers '428 because Ehlers '428 does not disclose assessing for each appliance an energy consumption profile, summing the energy consumption profiles of the appliances to determine if their sum leads to one or more peaks in

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power demand, and providing new energy consumption profiles to the appliances for leveling the total power absorbed by the appliances.

Because claims 7 and 9 depend, directly or indirectly, from claim 6, they are patentable over Ehlers '428 for the same reasons. Applicant requests withdrawal of the rejection and the allowance of claims 6, 7, and 9.

Rejection Under 35 U.S.C. §103(a)

Claims 3 and 8 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Ehlers '428 in view of U.S. Patent No. 4,612,619 to Culp. The rejection is traversed.

Culp '619 discloses a plurality of loads controlled by a duty cycle routine which determines on and off times for each load. During a preselected duty cycle time interval, a gap time, or time during which loads are in an "ON" condition, is determined based upon the off time for each load, the off time kilowatt value for each load, and the duty cycle time interval. Loads are then turned off by turning the load with the greatest off time kilowatt rating off, followed by the load with the smallest off time kilowatt rating, followed by the load with the next greatest off time kilowatt rating, followed by the load with the next smallest off time kilowatt rating, and so on. The routine effectively spaces the on and off times, and controls the loads according to their power consumption values, in order to avoid turning all loads on or off at the same time.

The standards for a finding of obviousness must be strictly adhered to. Simply citing one or more prior art references that illustrate different facets of the invention and then concluding that it would be obvious to combine the references to create the applicant's invention is wholly inadequate.

A claimed invention is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art....The ultimate determination of whether an invention would have been obvious under 35 U.S.C. §103(a) is a **legal conclusion based on underlying findings of fact.**¹

A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field....Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher."

Most if not all inventions arise from a combination of old elements....Thus, every element of a claimed invention may often be found in the prior art....However, **identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention....**Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, **there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant....**Even when obviousness is based on a single prior art

¹ The underlying factual inquiries include (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; and (3) the differences between the claimed invention and the prior art. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 15 L. Ed. 2d 545, 86 S. Ct. 684 (1966).

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reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved....In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references....The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art....Whether the Patent Office Examiner relies on an express or an implicit showing, **the Examiner must provide particular findings related thereto....Broad conclusory statements standing alone are not "evidence."**

In Re Werner Kotzab, 217 F.3d 1365; 55 U.S.P.Q.2d (BNA) 1313 (Fed. Cir. 2000)(citations omitted)(emphasis added).

The Examiner has failed to identify any motivation, suggestion, or teaching of the desirability of combining Ehlers '428 with Culp '619 to arrive at Applicants' invention. There has been no statement identified in either reference, there has been no discussion of the knowledge of one of ordinary skill in the art or the nature of the problem to be solved, there has been no identification of what the teachings of Ehlers '428 and Culp '619, the knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to one of ordinary skill in the art as required for a showing of motivation. The Examiner has failed to provide any particular findings related to any motivation, suggestion, or teaching of the desirability of combining Ehlers '428 with Culp '619. Indeed, such motivation,

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suggestion, or teaching is entirely lacking, and contraindicated by the teachings of both references.

Culp '619 teaches a sequencing of load on-off times based solely upon the magnitude of the power consumption of each load and the desire to evenly space the on and off times. Ehlers '428 teaches turning loads on or off according to preestablished criteria such as electricity rates, the importance of operating the load, contract-based power consumption limits, and the like, with the power utility initiating a turn on or turn off command. These two systems are incompatible. Sequencing the on and off times of a load based on the magnitude of the power consumption and the even spacing of the on and off times, as taught by Culp '619, would be incompatible and unworkable with a system in which on and off times are determined by other factors which would very likely lead to uneven load selection and on and off time sequencing, as taught by Ehlers '428. The Examiner conclusively asserts, without any support, that it would have been obvious to modify Ehlers '428 with the teachings of Culp '619, even though Ehlers '428 and Culp '619 are incompatible. Such conclusory assertions are not evidence.

The Examiner has simply "cherry-picked" elements from various references, and relied upon "broad conclusory statements standing alone," which can only lead to the conclusion that the Examiner is simply relying on impermissible hindsight reconstruction of Applicants' invention.

Even if the combination of Ehlers '428 and Culp '619 were proper, the combination still would not reach Applicants' invention. As discussed above, Ehlers '428 does not disclose the establishment of power consumption profiles for the power consuming devices, the summing of such profiles, or the generation of new energy consumption profiles for leveling the total power consumed by the power consuming devices, as called for in claims 1 and 6. Similarly, Culp '619 does not disclose these elements. Therefore, the combination of Ehlers '428 and Culp '619 does not disclose the inventions of claims 1 and 6. Since claims 3 and 8 depend from claims 1 and 6, respectively, these claims also call for the establishment of power consumption profiles for the

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power consuming devices, the summing of such profiles, and the generation of new energy consumption profiles for leveling the total power consumed by the power consuming devices. Thus, claims 3 and 8 are patentable over Ehlers '428 in view of Culp '619.

Applicants request withdrawal of the rejection, and the allowance of claims 3 and 8.

Claims 5 and 10 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Ehlers '428 in view of U.S. Patent No. 6,519,509 to Nierlich et al. The rejection is traversed.

Nierlich '509 discloses a system of monitoring and controlling remotely-located loads by using an Internet-based network of communication devices which exchange open market energy prices as a basis for optimizing power distribution and use. Nierlich '509 does not disclose summing of power consumption profiles for power consuming devices, or the generation of new energy consumption profiles for leveling the total power consumed by a plurality of power consuming devices.

Again, the Examiner has failed to identify any motivation, suggestion, or teaching of the desirability of combining Ehlers '428 with Nierlich '509 to arrive at Applicants' invention. The Examiner simply asserts, without any support, that it would have been obvious to modify Ehlers '428 with the teachings of Nierlich '509. Indeed, since energy prices are one of the factors utilized by the system of Ehlers '428, there would be no motivation to consider a system that simply does the same. The Examiner has "cherry-picked" elements from Nierlich '509 to add to Ehlers '428, and relied upon "broad conclusory statements standing alone," which can only lead to the conclusion that the Examiner is simply relying on impermissible hindsight reconstruction of Applicants' invention.

Moreover, Even if the combination of Ehlers '428 and Nierlich '509 were proper, the combination still would not reach Applicants' invention. As discussed above, Ehlers '428 does not disclose the summing of power consumption profiles for the power consuming devices, or the generation of new energy consumption profiles for leveling the total power consumed by the

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power consuming devices, as called for in claims 1 and 6. Similarly, Nierlich '509 does not disclose these elements. Therefor, the combination of Ehlers '428 and Nierlich '509 does not disclose the inventions of claims 1 and 6. Since claims 5 and 10 depend from claims 1 and 6, respectively, these claims also call for the summing of power consumption profiles for the power consuming devices, and the generation of new energy consumption profiles for leveling the total power consumed by the power consuming devices. Thus, claims 5 and 10 are patentable over Ehlers '428 in view of Culp '619.

Applicants request withdrawal of the rejection, and the allowance of claims 5 and 10.

Claims 11 and 12 depend from claim 1, and claims 13 and 14 depend from claim 6, respectively. For the reasons discussed above, claims 11-14 are patentable over the prior art of record. Thus, Applicants request the allowance of claims 11-14.

CONCLUSION

For the reasons discussed above, all claims in the Application are allowable over the prior art of record. Early notification of allowability is respectfully requested. If there are any outstanding issues which the Examiner feels may be resolved by way of telephone conference, the Examiner is cordially invited to contact the undersigned to resolve these issues.

Respectfully submitted,

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